

## PRODUCT INTRODUCTION

LM Gateway414-B data acquisition gateway, based on a solid hardware platform design, a complete software kernel. Provide 4 RS-485 serial ports, 2 10/100 Mbps Ethernet ports, gateway embedded Modbus, DLT645, Mbus, PPI and other data acquisition drivers, provide private protocol driver integration, gateway as BACnet IP, BACnet MS/TP server provides data externally



## HARDWARE SPECIFICATION

### LM Gateway414 Hardware parameters:

|                                |  |
|--------------------------------|--|
| <b>CPU</b>                     | <b>4 core A9, clocked at 1.4GHz</b>                        |
| <b>RAM</b>                     | <b>512MB DDR3 High performance memory</b>                  |
| <b>Nand Flash</b>              | <b>MLC eMMC Onboard is 4GByte eMMC</b>                     |
| <b>Serial port</b>             | <b>4 fully isolated RS485/RS232 interface multiplexing</b> |
| <b>Network port</b>            | <b>2 100M/10M Ethernet interface</b>                       |
| <b>Power</b>                   | <b>DC9V~36V</b>  |
| <b>Total Weight</b>            | <b>230g</b>  |
| <b>Enclosure rating</b>        | <b>IP51</b>  |
| <b>Installation size</b>       | <b>140mm×112mm×35mm (L×W×H)</b>                            |
| <b>Mechanical installation</b> | <b>DIN rail card slot fixing</b>                           |

### LM Gateway414 Environmental parameters:

|                              |  |
|------------------------------|--|
| <b>Power consumption</b>     | <b>The maximum power consumption of the motherboard is ≤3W</b> |
| <b>Operating temperature</b> | <b>-40~80℃</b>   |
| <b>humidity</b>              | <b>20 to 90% non-condensing</b>                                |

## INTERFACE DEFINITION

### 1. POWER

| SIGNAL | DESCRIPTION           |
|--------|-----------------------|
| Vin+   | Power supply          |
| Vin-   | Negative power supply |
| E      | Safety ground         |

### 2. DC seat, 5.5\*2.1mm

In an environment with poor power quality, it is recommended to use a switching power supply to effectively improve the gateway's anti-interference ability.

### 3. Network port

10/100M high speed adaptive network card;

It adopts dual-level lightning protection and anti-static protection

to resist 2KV lightning strikes;

Unique MAC address

| LAN  | IP            | Subnet mask   |
|------|---------------|---------------|
| Eth0 | 192.168.1.230 | 255.255.255.0 |
| Eth1 | 192.168.0.230 | 255.255.255.0 |

### 4. CON

| PIN | SIGNAL   | DESCRIPTION             |
|-----|----------|-------------------------|
| 1   | COM1-A   | RS485-1 Positive signal |
| 2   | COM1-B   | RS485-1 Negative signal |
| 3   | COM1-GND | Signal ground           |
| 4   | COM2-A   | RS485-2 Positive signal |
| 5   | COM2-B   | RS485-2 Negative signal |
| 6   | COM2-GND | Signal ground           |
| 7   | COM3-A   | RS485-3 Positive signal |
| 8   | COM3-B   | RS485-3 Negative signal |
| 9   | COM3-GND | Signal ground           |
| 10  | COM4-A   | RS485-4 Positive signal |
| 11  | COM4-B   | RS485-4 Negative signal |
| 12  | COM4-GND | Signal ground           |

### RS485:

- Fully isolated RS485 interface with three levels of protection;
- Supports the highest level of 4KV protection for the 10/700uS test in the GB/T 17626.5-2008 standard;
- ±15kV human body discharge mode;
- ±15kV IEC1000-4-2 air gap discharge;
- Communication parameters can be configured, default communication parameters: 9600, 8-1-N.

### 5. LED

| PIN | MARK  | DESCRIPTION  |
|-----|-------|--|
| 1   | POWER | Power indicator, the light is on   |
| 2   | RUN   | System operation indication  |
| 3   | COM1  | Serial port 1 transceiver indication, green transmission, yellow reception |
| 4   | COM2  | Serial port 2 transceiver indication, green transmission, yellow reception |
| 5   | COM3  | Serial port 3 transceiver indication, green transmission, yellow reception |
| 6   | COM4  | Serial port 4transceiver indication, green transmission, yellow reception  |

## DATA ACQUISITION DRIVER

### Network port

- Modbus TCP Client
- Modbus RTU\_over\_TCP
- BACnet IP
- Siemens S7-200 Network
- Siemens S7-1200 Network
- Siemens S7-300 Network
- OPC UA

### Serial port

- Modbus RTU
- DLT645-1997,DLT645-2007
- CJ188

- Siemens S7-200 PPI
- Mbus\_EnergyMeter
- BACnet MS/TP

## DATA SERVICE

The gateway acts as a BACnet IP, and the BACnet MS/TP server provides external data.

Support AI, AO, AV, BI, BO, BV, MSI, MSO, MSV and other attributes, configurable data units.

Support for Who-Is and I-Am services; cov subscription, read, write, etc.

## DATA OPERATION

The data can be calculated by the expression. For example, A represents a collection point, the expression A/100 can be edited, the data is reduced by 100 times, A+0.5, the value is shifted by 0.5, and so on.

## DATA STORAGE

The gateway has data storage function, which can realize data storage of I/O points, user points, calculation points and system points. The data of the gateway can only be stored in the TF card.

## ALARMS AND EVENTS

The Alarms and Events page allows the user to set the trigger condition for the event, trigger the event when the condition is met, and perform the event release when the state transitions from the satisfied condition to the unsatisfied condition.

## MISSION PLAN

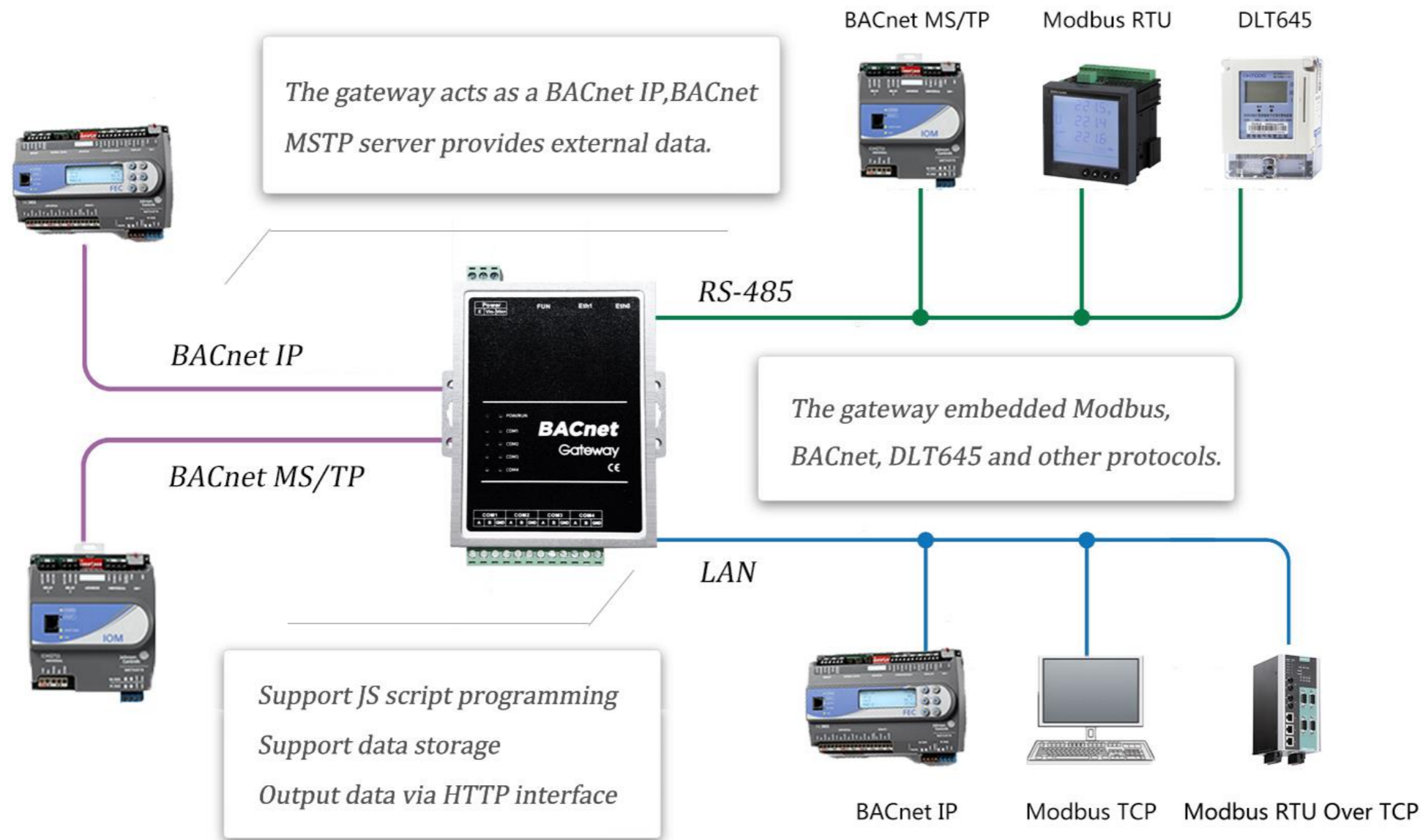
The user establishes a mission plan that specifies the values for multiple points for the day of the week and time period. Please calibrate the gateway time before using the mission planning function

## JavaScript EDITING

JavaScript script editor built-in function, user can customize logic control by editing script language

## APPLICATION

The gateway supports Modbus RTU, Modbus TCP protocol, Modbus RTU Over TCP protocol, DLT645-1997, DLT645-2007 protocol, CJ188 protocol. The gateway acts as a BACnet IP, and the BACnet MS/TP protocol server provides external data.



**CONFIGURING THE GATEWAY**

- 1, Power the gateway;
2. Connect the LM Gateway414 data collection gateway to the computer or switch using a crossover cable; (note that the gateway and the computer are in the same network segment);
3. Use the tool software to configure the data acquisition gateway. For the operation, see the configuration manual of the configuration tool.

[Download configuration tool](#)

**CONTACT US**

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